

**REMARKS**

In the Office Action, claims 1-10 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In particular, claim 1 was rejected on the basis that it is "confusing how pouring concrete into a hole now makes the concrete reinforced." *See Office Action*, p. 2. Claim 2 was rejected because the Examiner asserts that the term "and" in line 1 appears as if it should be replaced with "of."

Claim 11 was rejected under 35 U.S.C. § 102(b) as allegedly anticipated by United States Pat. No. 6,161,357 to Altemus (hereinafter "Altemus"), and further rejected under this same section as allegedly anticipated by United States Pat. No. 2,201,110 to Makram (hereinafter "Makram"). Applicant respectfully traverses these rejections.

Further, claims 1, 2, 6-10 and 12-13 were rejected under 35 U.S.C. § 103(a) as allegedly rendered obvious by Altemus in view of United States Pat. No. 4,341,489 to Karnas (hereinafter "Karnas ") or United States Pat. No. 4,508,057 to Suzuki (hereinafter "Suzuki "); claims 1, 3, 4, 5, 7, 9, 10 and 12 were rejected under 35 U.S.C. § 103(a) as allegedly rendered obvious by Makram in view of Karnas or Suzuki.

**Claim Rejections Under 35 U.S.C. § 112, Second Paragraph**

Regarding the rejection of claim 1 under § 35 U.S.C. 112, second paragraph, the relevant portion of the claim recites "filling the continuous holes with concrete to provide reinforced concrete columns bonded to the sides of the through holes." The term "reinforced concrete *columns*" describes that the concrete columns are created by filling the continuous holes with concrete, and further that these concrete columns are reinforced by virtue of their bonding with the sides of the through holes. *See, e.g., Specification, ¶ 0009.* The term "reinforced" modifies "concrete columns," and these columns are clearly reinforced by their bond to the sides of the through holes.

Regarding claim 2, Applicant thanks the Examiner for noting the error in this claim, and Applicant has amended this claim in order to correct it in accordance with the Examiner's suggestion, replacing the term "and" with the term "of."

Accordingly, Applicant respectfully submits that claim 1 and claim 2 as amended are in compliance with 35 U.S.C. § 112, second paragraph.

Claim Rejections Under 35 U.S.C. § 102(b)

Claim 11 was rejected under 35 U.S.C. 102(b) as allegedly anticipated by Altemus, and further rejected under this same section as allegedly anticipated by Makram. Applicant respectfully traverses these rejections.

As amended, claim 11 is directed to a module for use in assembling an artificial reef comprising a concrete block having top and bottom surfaces and side surfaces, at least one through hole extending through the module from the top surface to the bottom surface which is at least partially filled with concrete that is bonded to the interior walls of the through hole, at least one projection extending away from one of the top and bottom surfaces at a location defined with respect to the location of the through hole, and at least one recess extending into the other of the top and bottom surfaces at a location corresponding to that of the projection

No such module is described in or suggested by Altemus or Makram. Instead, Altemus discloses an interlocking brick wall system, with intersecting vertical and horizontal hollow passageways which may be used for either additional support, or for the installation of plumbing or electrical supply lines. *See Altemus*, col. 2, lines 10-37. Makram discloses a brick or block "for use in general building and wall construction, as well as in the production of refractory or fire bricks adapted for the building of furnaces and for furnace linings." *See Makram*, col. 1, lines 1-5. Neither of these references describes or suggests the artificial reef module recited in claim 11. Accordingly, applicant respectfully submits that Claim 11 as amended is neither anticipated by nor rendered obvious over Altemus or Makram, either alone or in combination.

Claim Rejections Under 35 U.S.C. § 103(a)

Claims 1, 2, 6-10 and 12-13 were rejected under 35 U.S.C. § 103(a) as allegedly rendered obvious by Altemus in view of Karnas or Suzuki. Claims 1, 3, 4, 5, 7, 9, 10 and

12 were further rejected under 35 U.S.C. § 103(a) as allegedly rendered obvious by Makram in view of Karnas or Suzuki. Applicant respectfully traverses these rejections.

The combinations of Altemus with Karnas or Suzuki and Makram with Karnas or Suzuki are not properly made. Altemus describes an interlocking brick system for use in the construction of walls. *See Altemus, Abstract.* Makram describes a brick or block system for use in the construction of walls and furnaces or furnace linings. *See Makram,* col. 1, lines 1-5. The Examiner attempts to combine these references with Karnas and Suzuki, which both pertain to artificial offshore reef assemblies that do not describe or suggest the features recited in the claims of the present invention. As the Court of Appeals for the Federal Circuit has held:

"It has not been shown that a person of ordinary skill, seeking to solve a problem of fastening a hose clamp, would reasonably be expected or motivated to look to fasteners for garments. The combination of elements from non-analogous sources, in a manner that reconstructs the applicant's invention only with the benefit of hindsight, is insufficient to present a *prima facie* case of obviousness. There must be some reason, suggestion, or motivation found in the prior art whereby a person of ordinary skill in the field of the invention would make the combination. That knowledge can not come from the applicant's invention itself."

*In re Oetiker*, 24, U.S.P.Q.2d 1443, 1447, 977 F.2d 1443, 1447 (Fed. Cir. 1992).

There is no "reason, suggestion, or motivation" in the prior art such that one of ordinary skill in the art would make the combinations which form the basis of the rejections under 35 U.S.C. § 103(a) in the Office Action. This combination of elements between non-analogous sources, i.e., artificial reefs and wall/furnace construction, is apparently improperly made only with the benefit of hindsight in view of the present application. In much the same way that one seeking to solve a problem of "fastening a hose clamp" would not "reasonably be expected or motivated to look to fasteners for garments" for a solution, it is equally unlikely that one seeking to solve a problem in artificial reef design would reasonably look to wall and furnace construction. *See id.* Accordingly, because there is no teaching or suggestion towards the cited combination in the prior art, in conformity with the law as recited by the Federal Circuit, these references are not properly combined. Applicant therefore respectfully requests that the rejections

of claims 1-10, claim 12 as amended, and claim 13 under 35 U.S.C. § 103(a) be withdrawn, and submits that these claims are in condition for allowance.

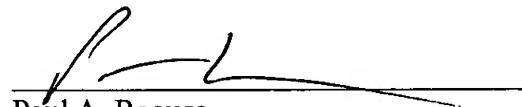
Moreover, even assuming *arguendo* that such a combination can be made, the cited art does not render claims 1-10 and 12-13 obvious. Claims 1, 11 and 12 as amended are directed to concrete modules for constructing an artificial reef, wherein when assembled, provides through-holes which may be filled with concrete that bonds to the inner surface of the through-holes. This provides a stronger and more rigid structure which can better withstand the storm surges and wave forces that could not be resisted by artificial reef constructs of the prior art. *See Specification, ¶¶ 2-3.*

No such module is disclosed in or suggested by Altemus and/or Makram viewed in combination with Karnas or Suzuki. As noted above, neither Altemus nor Makram disclose or suggest at least a concrete module for use in constructing an artificial reef wherein through-holes in the structure are filled with concrete columns which bond to the inner surfaces of the through-holes. Nothing in Karnas or Suzuki makes up for this deficiency. Accordingly, Applicant respectfully requests that these claims be allowed.

### CONCLUSION

In view of the foregoing amendments and remarks, favorable consideration and allowance of claims 1-13 are respectfully solicited. In the event that the application is not deemed in condition for allowance, the examiner is invited to contact the undersigned in an effort to advance the prosecution of this application.

Respectfully submitted,



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**VERSION WITH MARKINGS TO SHOW CHANGES MADE  
IN THE CLAIMS:**

Please amend claims 2, 11 and 12 as follows:

-- 2. (Amended) A method according to claim 1 wherein the through holes [and] of the modules extend vertically through the projections and recesses of the modules.

11. (Amended) A module for use in assembling an artificial reef comprising:

a concrete block having top and bottom surfaces and side surfaces; at least one through hole extending through the module from the top surface to the bottom surface, which is at least partially filled with concrete that is bonded to the interior walls of the through hole;

at least one projection extending away from one of the top and bottom surfaces at a location defined with respect to the location of the through hole; and

at least one recess extending into the other of the top and bottom surfaces at a location corresponding to that of the projection.

12. (Amended) An artificial reef comprising:  
successive superposed layers of laterally adjacent concrete modules, each module having a projection received in a correspondingly shaped recess of a module in an adjacent layer and having a through hole at a defined specific location with respect to the projection and recess in the module so that the through holes of a plurality of modules when assembled in successive superposed layers will provide [an] a continuous vertical through hole extending through the layers; and

a column of concrete filling each of the vertical through holes extending through the layers, such that the concrete column is bonded to the inside surfaces of the vertical through holes. --